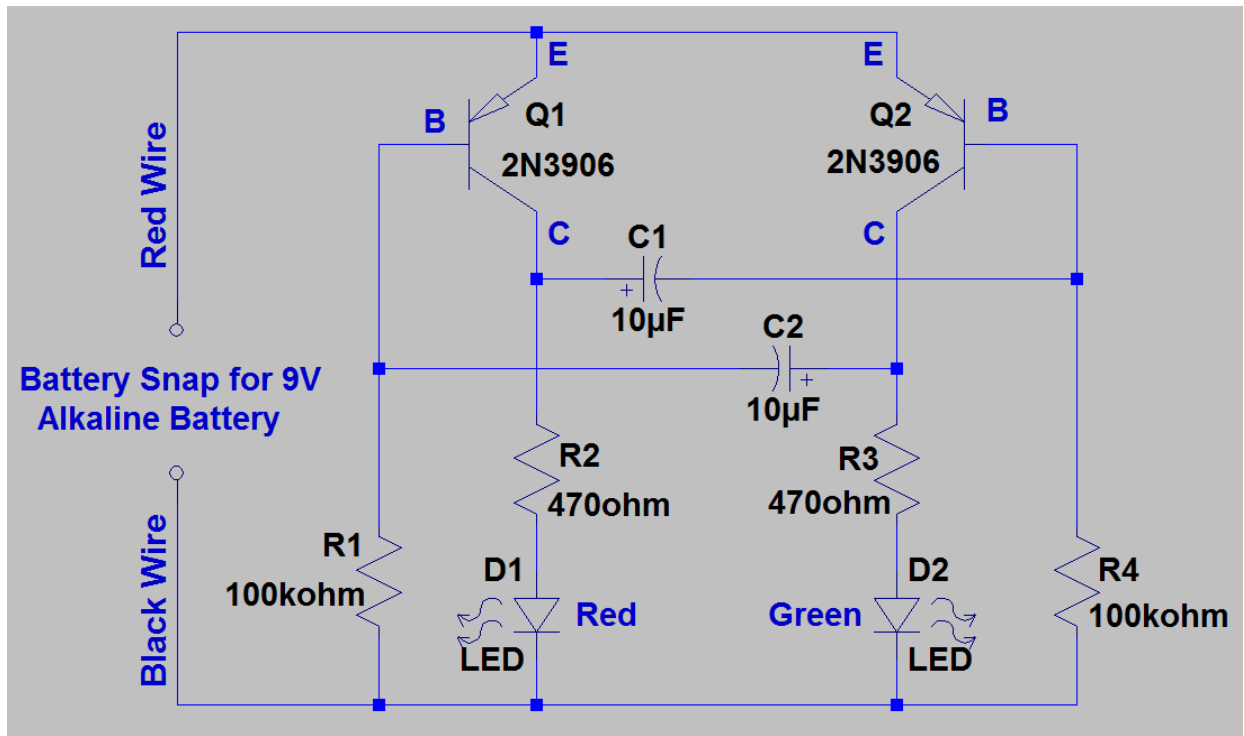
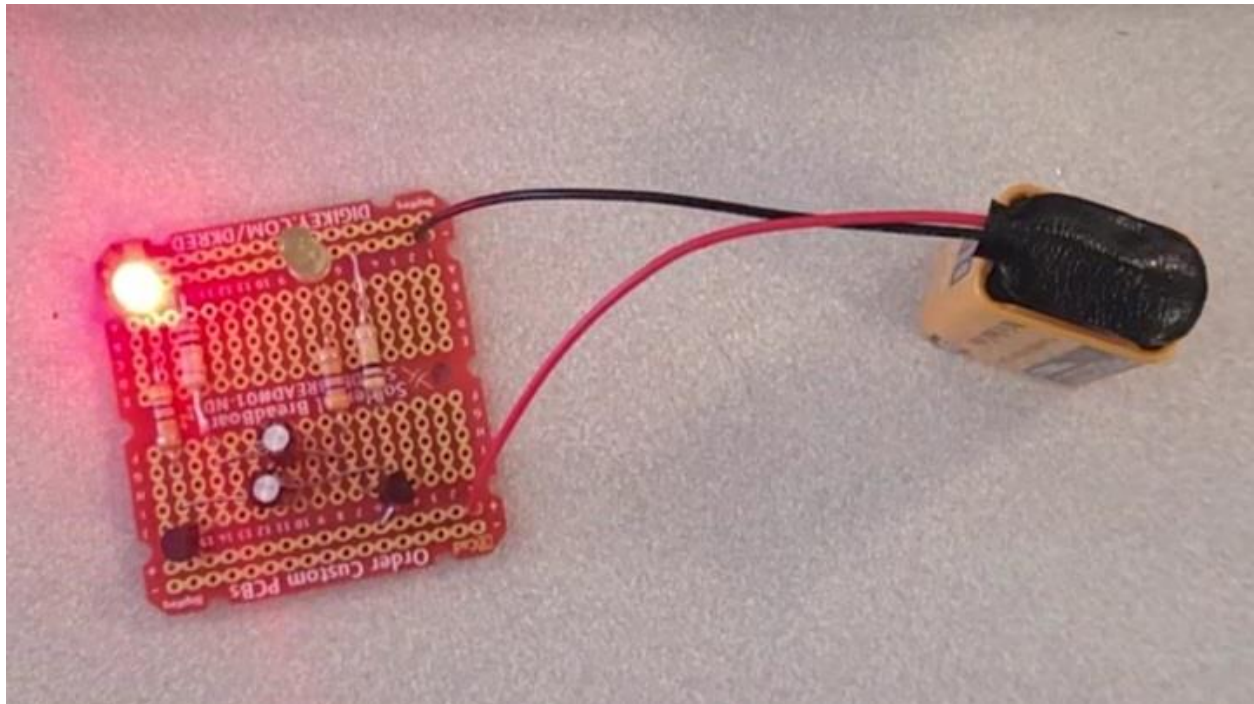


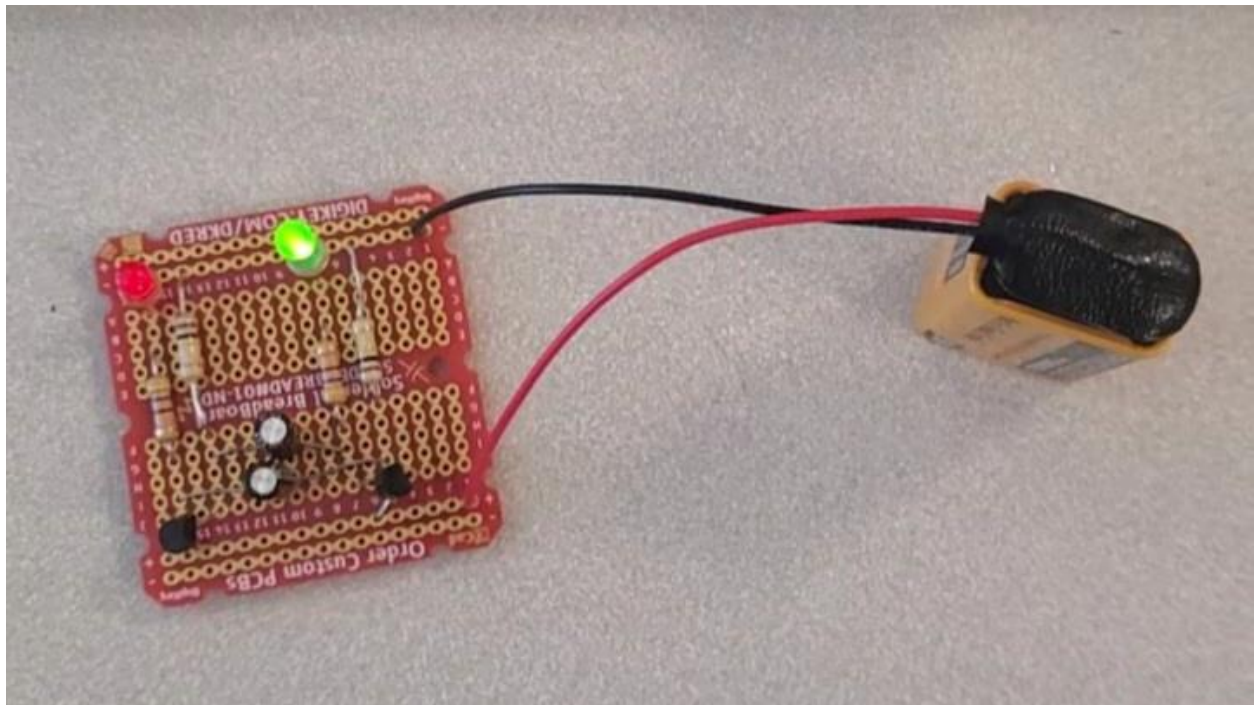
**Brodrick Young**  
**ECEN 350**  
**Blinking Light Circuit Lab**  
**03/07/2025**



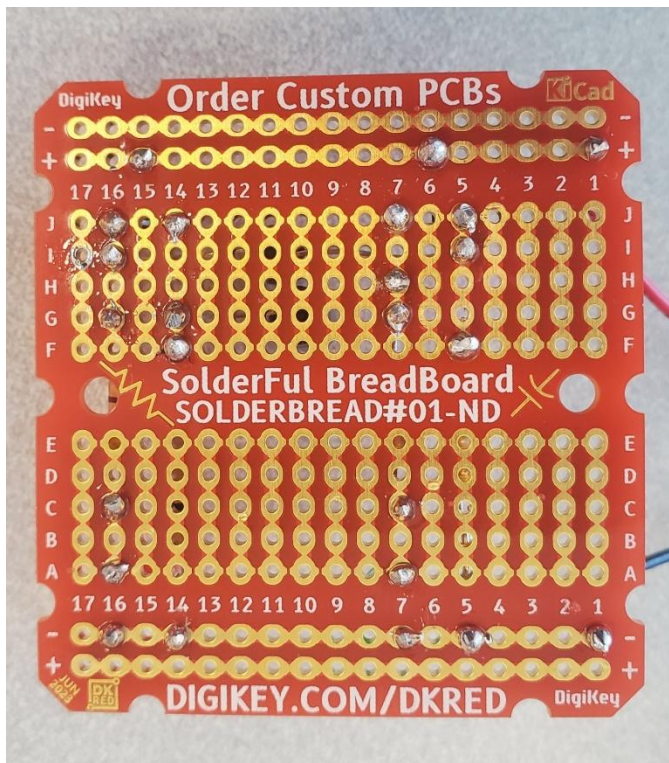
**Figure 1:** Blinking Light Circuit Schematic



**Figure 2:** Red light on, green light off



**Figure 3:** Green light on, red light off



**Figure 4:** Solder side (underside) of protoboard

### Discussion and Conclusions Questions:

1. Describe the functional status of your photographed Blinking Light Circuit as one of the following: Fully functional on the soldered protoboard, partially functional on the soldered protoboard, functional on a breadboard but not when soldered onto a protoboard, breadboarded but not functional, or neither breadboard or soldered protoboard completed. (10 Points Possible.)

The functional status of my blinking light circuit was fully functional on the soldered breadboard.

2. Which 4 components illustrated in the Blinking Light Circuit of **Figure 1** control the blinking rate of the circuit? (2 points.)

The 4 components that control the blinking rate are the 2 capacitors and the 2 pnp transistors.

3. Describe the main function of pnp transistors Q1 and Q2 in the Blinking Light Circuit of **Figure 1**. (2 points.)

The pnp transistors main function is to act as a switch. While the capacitor is discharging and greater than 0.3V, it should operate as a closed switch and when the capacitor is discharged it will then act as an open switch. During this time the other capacitor will be charging and then once charged its transistor will act as a closed switch and the capacitor can discharge and it just oscillates back and forth.

4. Describe something that you learned from watching the video on through-hole soldering. (2 points.)

I learned that sometimes you can just lay the component on the table with the leads sticking through the board so it lays flat and tight to the board to solder and also won't move while you're soldering.